Campus Update

President G. Wayne Clough

Georgia Tech Advisory Board
October 1, 2004

Incoming freshmen

- 2,600 students (+18%)
  - 782 women (+28%)
  - 153 African Americans (+21%)
  - 105 Hispanics (+48%)
  - 116 international (+35%)
- 1337 average SAT
- 8 perfect SATs, 1 perfect ACT
- 5 sets of twins

Students shine

Goldwater Scholarships:
Mark Oliver
Thomas Callaghan

Blair Dowling, winner of the Phi Kappa Phi Scholarship Cup for the best scholastic record of the class of 2003: Homeland Security Fellowship

Laurence Ralph: Mellon Fellowship in Humanistic Studies

Gabe Brostow: Marshall Sherfield Fellowship

Monique Gupta: Churchill Scholarship

Jia Xu: Marshall Scholarship

Students innovate

GT Motorsports won Formula SAE in Australia

Architecture students developed and tested a middle-school program in design

Computing team competed in international programming in Prague

“Diametric” won Campus MovieFest, trip to Hollywood for students

Students contribute

11 Alive News photo

President Bush recognized Brandon Gray's volunteer work with low-income preschoolers

Football team built a Habitat for Humanity house over the summer

Computing students design website to support Cut Out Hunger

Tech students helped Centennial Place School become Atlanta's top achiever

Faculty honored

National Medal of Technology: Russell Dupuis, elec and comp engineering

Presidential Early Career Award for Scientists and Engineers: Julia Kubanek, biology

Presidential Green Chemistry Challenge Award: Charles Eckert, chemical & biomolecular engineering, and Charles Liotta, chemistry

Descartes Prize (prestigious European award for collaborative research): Jean-Luc Bredas, chemistry & biochemistry

Creating innovative programs

Price Institute Innovative Entrepreneurship Educators Award: TI:GER (Technological Innovation: Generating Economic Results)

Board of Regents Award for Excellence in Teaching: School of Modern Languages

Tennenbaum Institute for Enterprise Transformation: A unique interdisciplinary institute to help private enterprises manage and initiate change

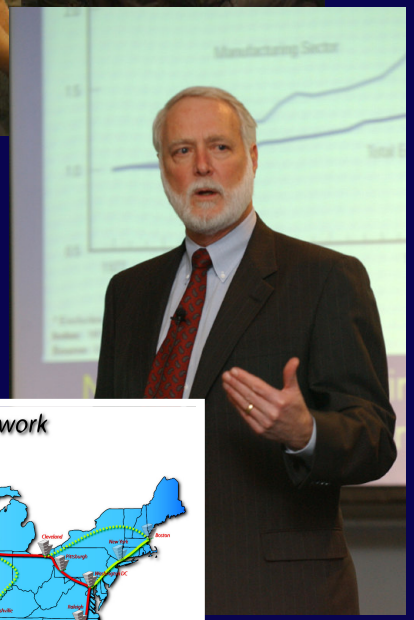
Rankings remain high

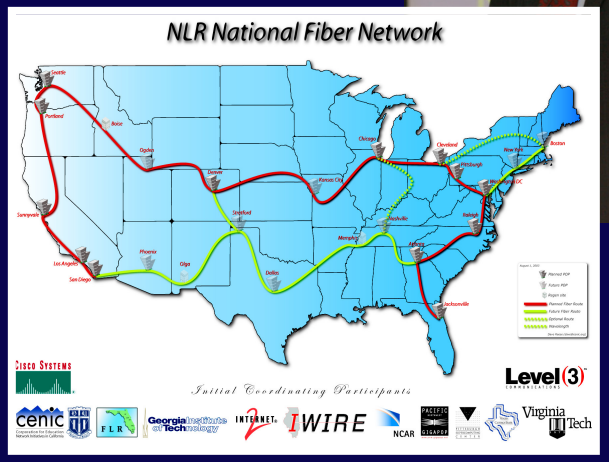
- Georgia Tech remains among top ten public universities
  - Peer assessment score in top 30 of all universities, tied with Emory and Georgetown
- College of Management moves up to #34
  - 3 programs in the nation's top 15
- All engineering programs in the top 15
  - 4 engineering programs in the top 5
- Co-op program among 11 "Academic programs to look for"
- #1 among publics in % of alumni who contribute

U.S. News & World Report 2005 Undergraduate rankings

Research: New milestones

- Awards: $342 million
- Expenditures: ~$425 million
- Invention disclosures: 277
- NIH: $17.2 million (doubled in past 2 years)
- Interdisciplinary research: $106.8 million in active contracts with inter-disciplinary centers
- Ovarian Cancer Institute





Tech's national presence

- National Innovation Initiative
- Sam Nunn Policy Forum on Bioterrorism
- National Lambda Rail
- National Nanotech Infrastructure Network
- Wayne Clough nominated to National Science Board

Construction continues

Campus Rec Center

Stamps Student Center Commons

Klaus Advanced Computing Building

Molecular Science and Engineering Building

It can be done

15 of 17 teams in post-season play.
Lacrosse, rowing clubs go national.

First basketball team from Georgia to play in the Division I-A National Championship Game.

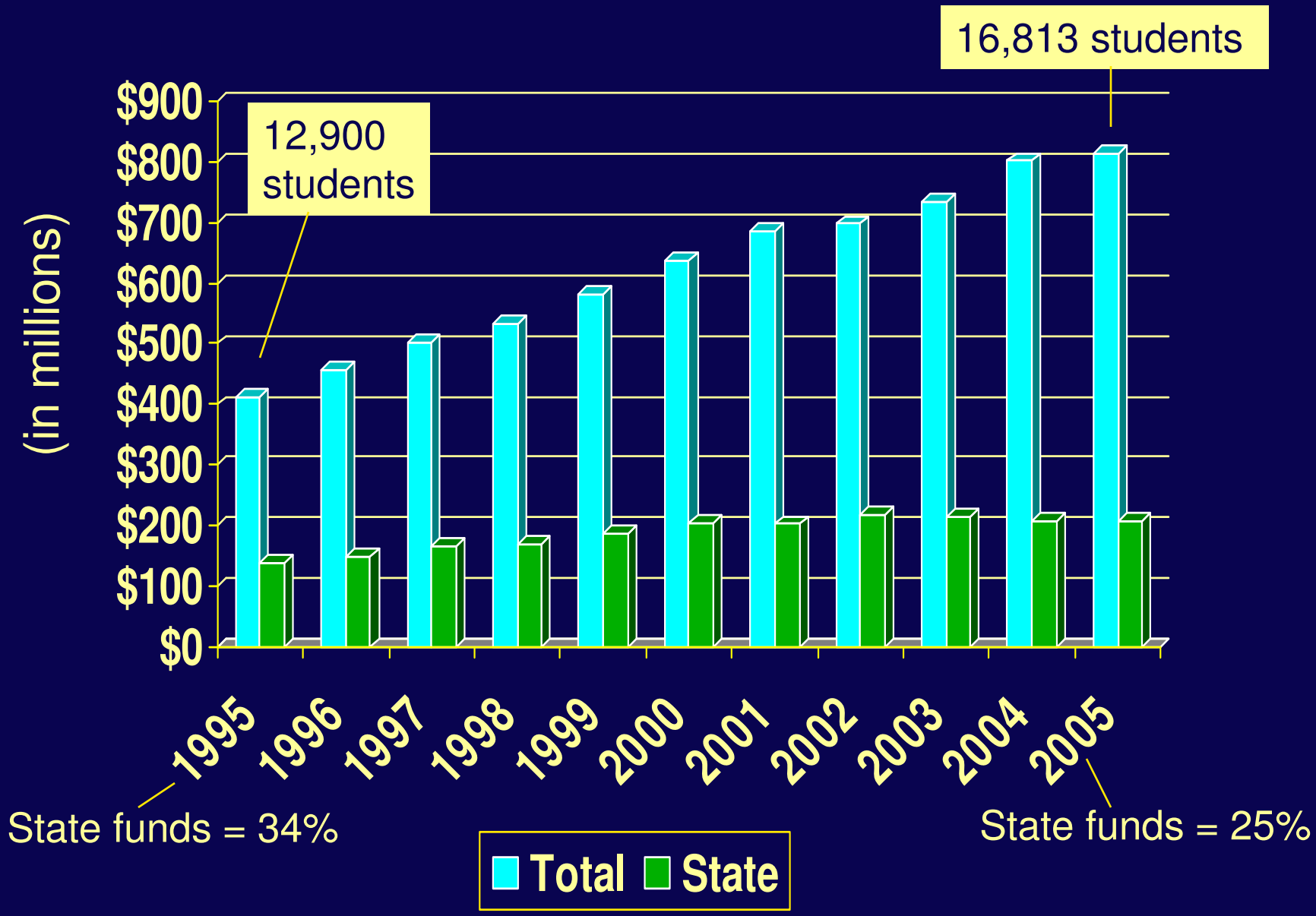
Volleyball team finished its season ranked 8th in the nation.

Baseball team won 20 straight, became NCAA Atlanta Region Champs.

State budget issues

- Governor cuts $170 m from FY 2005 budget
  - University System of Georgia will bear disproportionate share ($68 m)
  - Georgia Tech's allocation to be reduced by $8 m
- Unfortunate timing
- Regents consider midyear 10% tuition increase
- Layoffs? Enrollments capped?
- FY06: formula funding restricted

Budget expenditures



"Preparing the Georgia Tech graduate for 2020"

Looking ahead 20 years

- 2 billion more people
- Fresh water shortages
- Rising energy demands
- Global warming
- New diseases?
- Increasing terrorism?
- A biotech revolution?
- A nanotech revolution?

Future world trends

- Aging population in developed world vs. “youth bulge” in Africa, Asia
- Growing strength of technological workforce in India and China
- Globally dispersed “round the clock” teams of employees

Powerful trends reshaping the world economy

- High-speed communications / Internet
- End of the Cold War political constrictions
- Removal of barriers to trade and growth of trading blocks
- Emergence of technology-based economies in other nations
- Sustained investment in higher education in counties like India and China

Trends at Georgia Tech

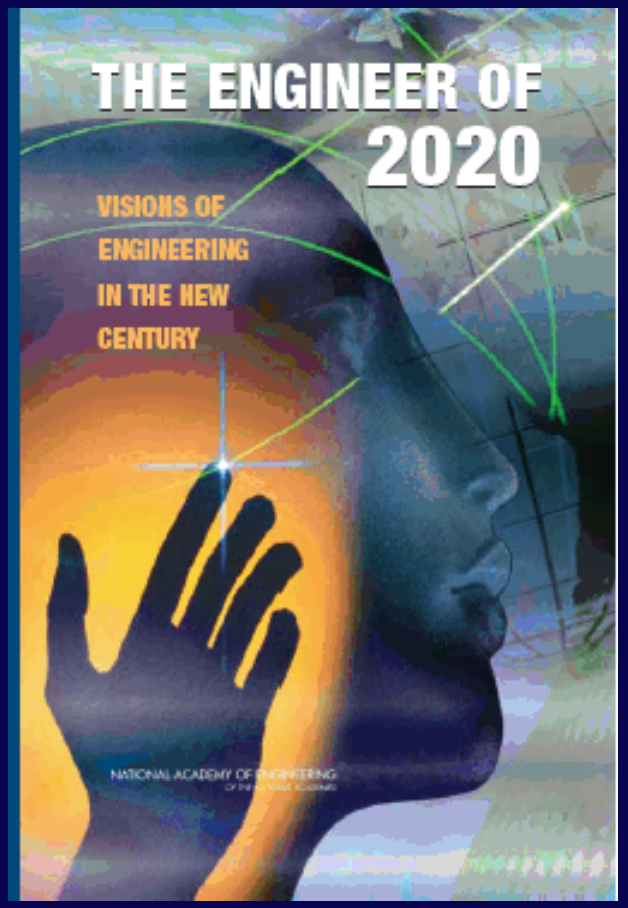
- Student body has changed
  - Stronger credentials (more AP courses)
  - More well-rounded (Study Abroad, research)
  - More diverse
- Education and research programs are more interdisciplinary
- Faculty more diverse and sophisticated
- Increasing international activity
- Growth in non-engineering programs
- Increased reliance on non-state funding

Why worry about 2020 now?

- World economic forces are emerging that will impact the American economy.
- Many of the solutions will take time to develop and mobilize; we must begin now while we still have time.
- Innovation is the “hole card” that will drive economic growth and high-wage, quality jobs.

The Engineer of 2020

- Phase I: imagining the world of 2020 and the new challenges it will present to engineers
- Phase II: considering how engineering education should change to prepare for those new challenges



Questions for discussion

- How should we change our core curriculum?
- How should we change our upper-level courses for majors?
- How can we ensure that faculty are prepared to support curriculum and co-curriculum innovation?